

7.3-Mtr Ka-Band Turning Head Antenna

Ka-Band Gateway Option

Ka-Band Gateway Antenna

Antenna Size	Tracking Method	Drive Method
≤ 9.0 -Mtr for Commercial Applications	Step Track with Predicative Tracking	Self-locking mechanical screw jacks
≥ 9.0 -Mtr for TT&C, IOT, Special Applications	Monopulse Tracking	AZ: Single motor dual pinion or dual motors EL: Self-locking mechanical screw jacks

Tracking Performance

Tracking Type

Beamwidth Tracking Capability

Step Track

10% 3dB Beamwidth

Predicative Track

5% 3dB Beamwidth

Monopulse Track

3% 3dB Beamwidth

LMA Antenna Tracking Performance

- Mechanical Screw Backlash: 0.1 – 0.2mm (0.008")
- Eutelsat Test Report for UAN Ka-Band Gateway for LMA 9.0M Antenna Smart-Step track is available.

SIZE	RX 3DB	TX 3DB	DRIVE RADIUS	BACKLASH	LOSS DB
7.3M	0.15°	0.11°	1542 mm	0.0074°	0.14
9.0M	0.12°	0.09°	1727 mm	0.0066°	0.15
13.2M	0.08°	0.06°	2194 mm	0.0052°	0.17

THA Antenna Tracking Analysis

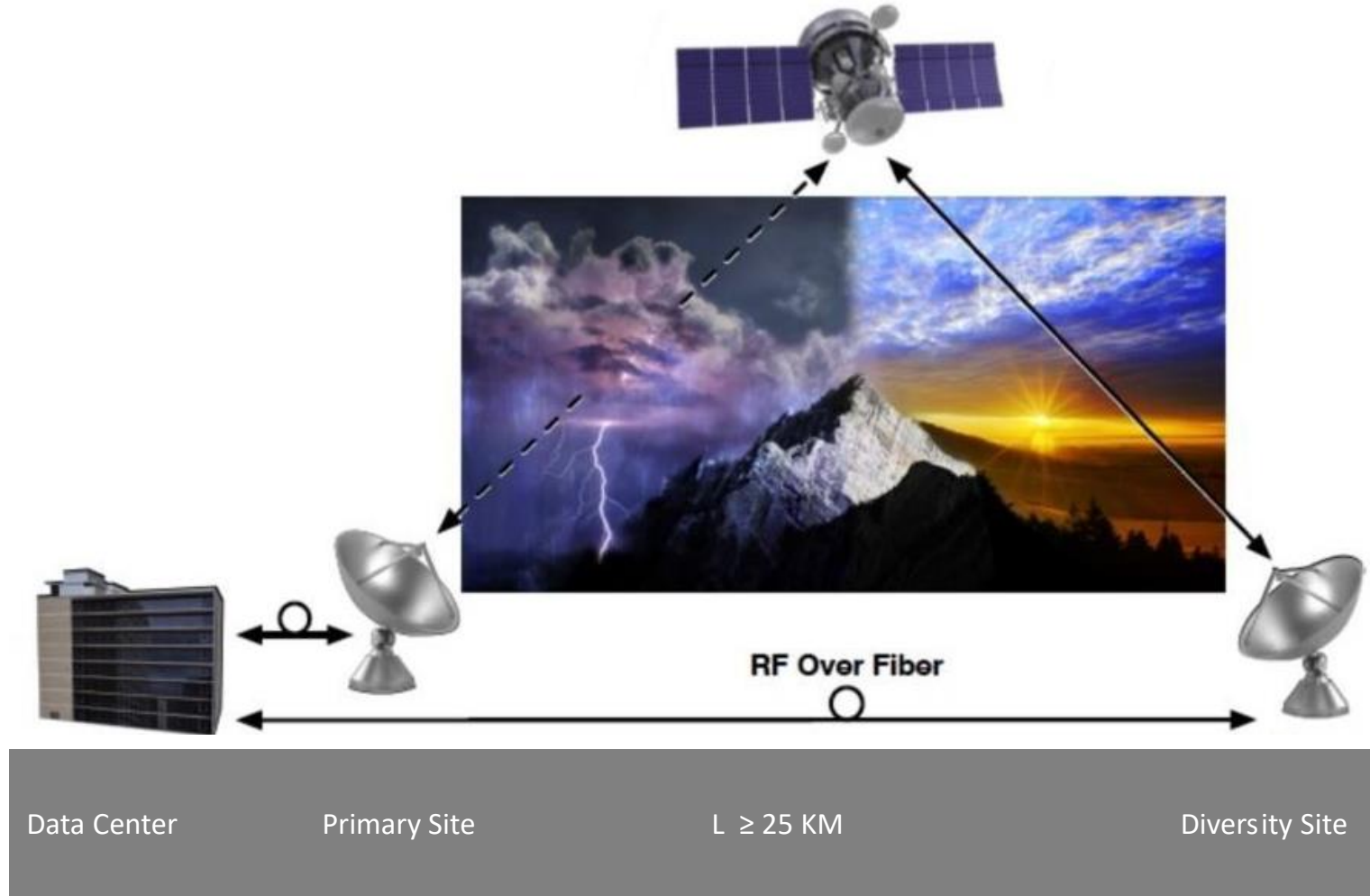
Jackscrew Backlash : 0.1 – 0.2mm (0.008")

Size	Rx 3dB	Tx 3dB	Drive Radius	Backlash	Loss dB
7.3THA	0.15°	0.11°	1000 mm	0.0115°	0.21
7.3THA	0.15°	0.11°	1400 mm	0.0082°	0.025

Rain Fade and Redundancy

- All Satcom systems work within the bandwidth limit in clear skies.
- Typical Uplink Power Control Range < 10dB
- Rain Fade
 - Cloudy : > 3-5 dB
 - Rainy : > 20 dB

Diversity Back Up
Ka-Band Application



Ka-Band Gateway

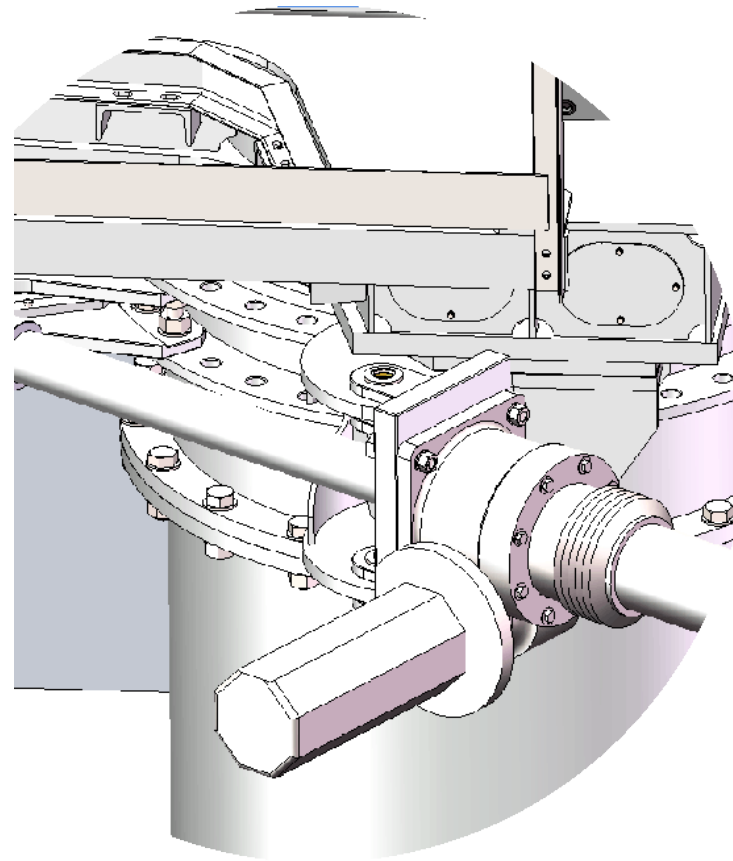
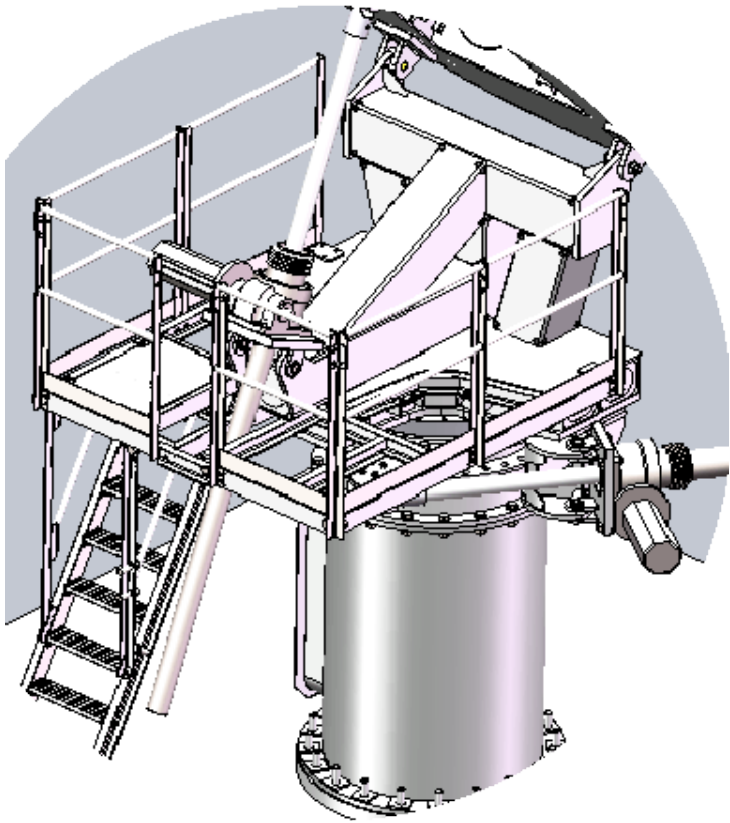
- 7.3M Ka-Band Antenna with Step Track Controller and Diversity Backup Site.
- Reasonable cost and highest reliability solution.

Turning Head Antenna

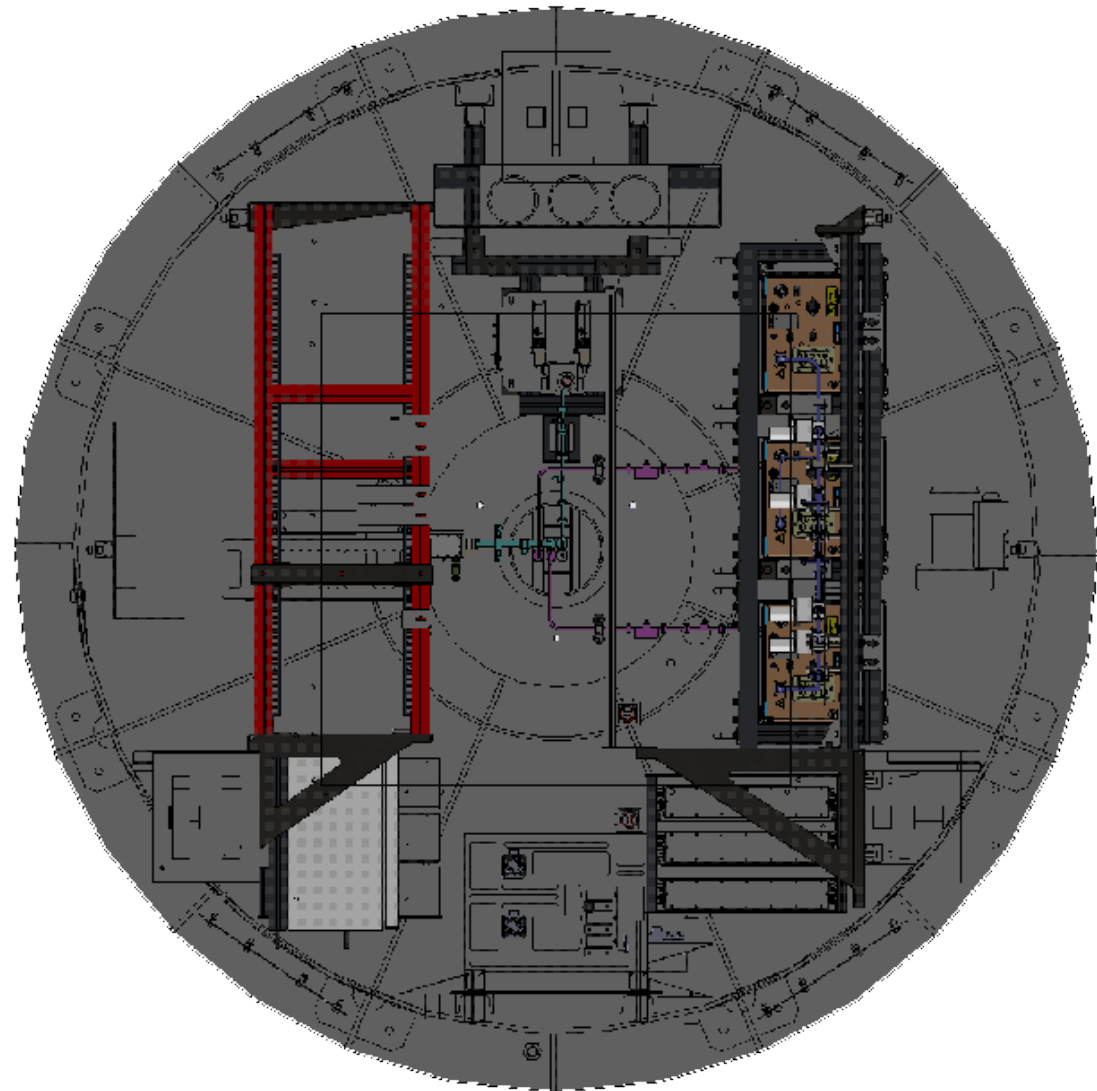
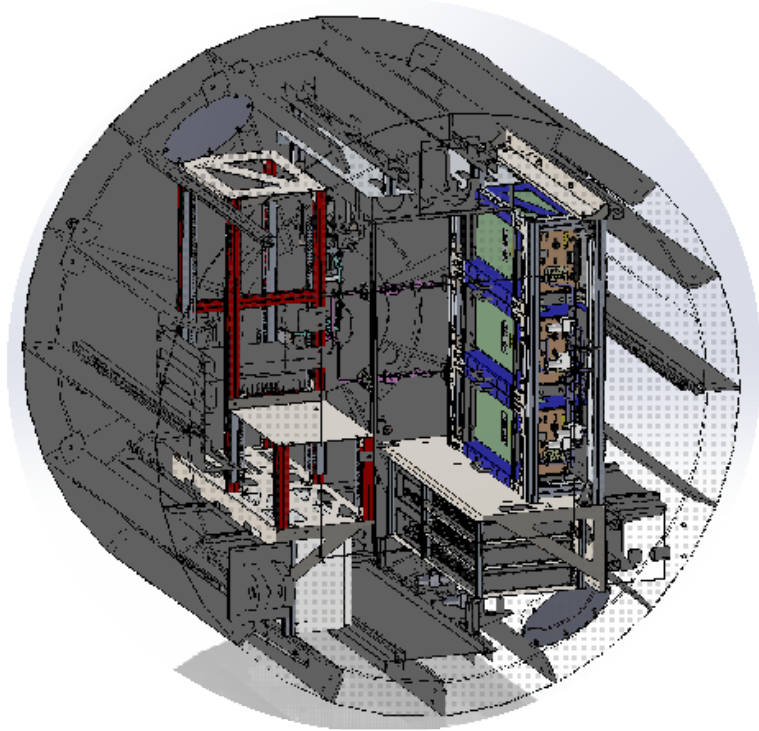


- Manually repositionable 6.2-Mtr & 7.3-Mtr Turning Head Antennas (THA) with Azimuth slew gear and repositionable Azimuth jack attachment.

Benefits of a Turning Head Antenna

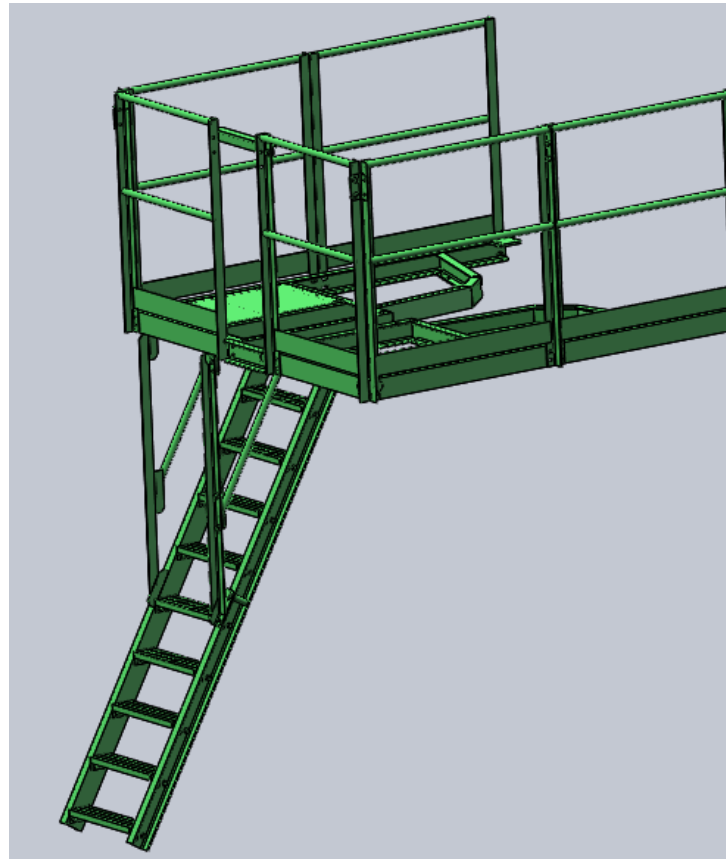


- Cost effective AZ & EI drives, complete with fail-safe, self-locking, mechanical screws and anti-backlash adjustments.
- Adjustable backlash capability within 0.1 – 0.2mm (0.008”), ensuring necessary tracking capability at Ka-Band.
- EL Travel : 0 to 90°
- AZ Travel : 0 +/- 180°
- Three (3) 60° Segments



- 2.0-Mtr x 1.4-Mtr diameter insulated Hub.
- Generous volume available for installation of Ka-Band RF components.
- Waveguide system/rack is integrated and designed in accordance with customer specified RF equipment.

Ladders & Platform

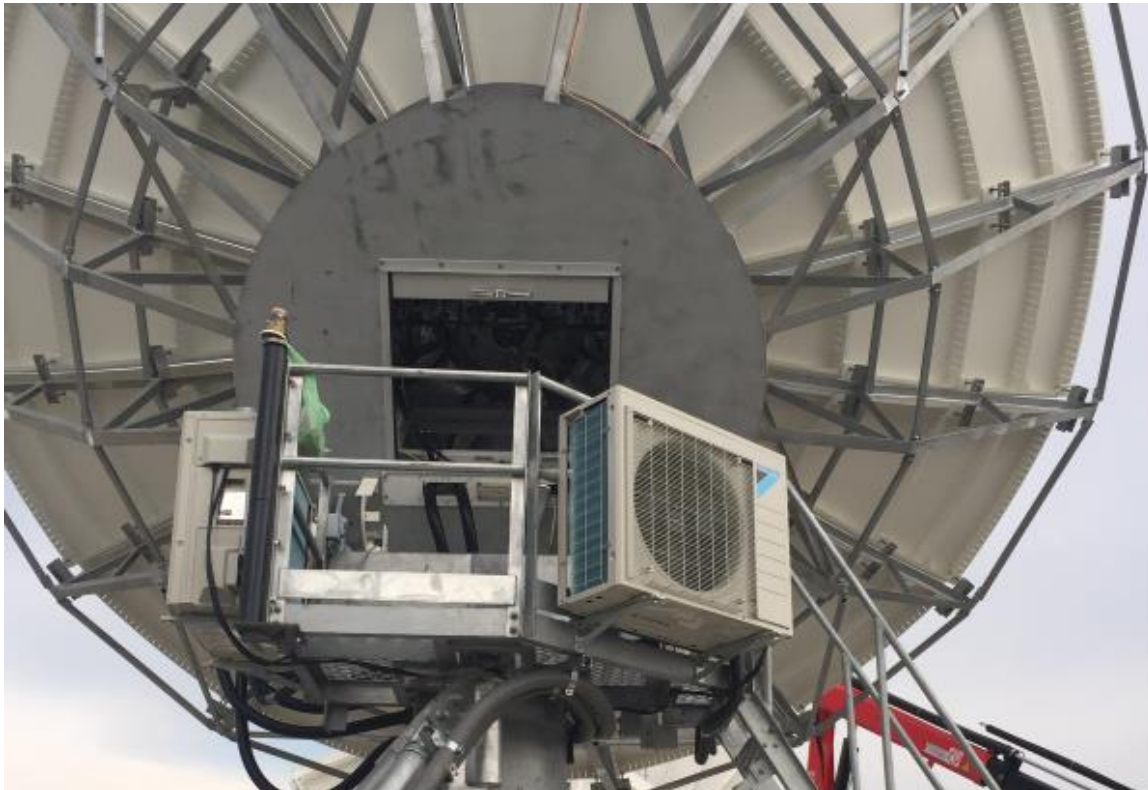


- Ladder and Platform are provided for safety and ease of maintenance.

- Expanded Platform for mounting AC units are not shown.

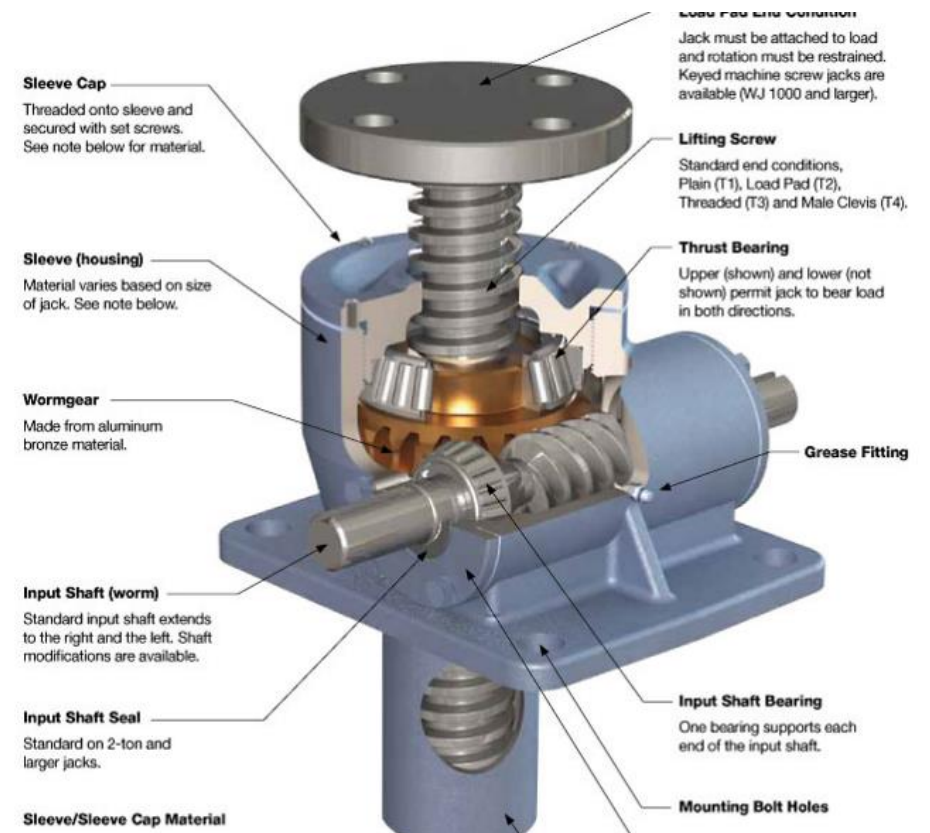
Hub

- Every Ka-Band insulated Hub is provided with a rolling door and four openings for provision of air circulation.
- Heat dissipation is achieved by 1:1 air conditioners, mounted on the expanded platform, or from the introduction of high volume of outside air.
- Type of air circulation is dependent on both the location and environmental site conditions and/ or the customer's requirements.



Jack Systems

- Industry proven jack systems are utilized on all of our antennas.
- All jack systems' designs and manufacturing components have been utilized throughout our industry for decades.
- All manufactured parts undergo multiple inspections, ensuring a quality product.
- 0.1 – 0.2mm (0.008") adjustment of backlash is available.





Alpha Ka-Band Antennas